REMARKS

Reconsideration of the above-identified application in view of the foregoing amendments and following arguments is respectfully requested.

In the Office Action, the Examiner stated that the Oath or Declaration was defective. Applicants wish to hold submitting a new oath or declaration in abeyance until receipt of notification from the Examiner of allowable subject matter.

In the Office Action, the claims were restricted into five (5) groups. Applicants elect to pursue the claims in Group I (claim 21). This election is made without traverse. Claims 22-27 have been deleted solely in response to this restriction requirement. Applicants reserve the right to pursue these claims in one or more divisional applications.

Claims 21 to 27 are rejected under 35 U.S.C. Section 112, first paragraph. Specifically, the Examiner states that "[B]ecause claims 21, 22, 26 and 27 recite the limitation 'and alterations, substitutions, additions and deletions thereof" in reference to a sequence, the sequence limitations of these claims have no meaning since they allow one to replace ('substitute') the referenced sequence with an entirely different sequence. Therefore, none of the instant claims recite the structural features which define 'a DNA binding domain of an Ah receptor'. Whereas the claims encompass any protein comprising 'DNA binding domain of an Ah receptor' the instant specification does not provide an adequate written description of the genus of protein encompassed by that term." Applicants respectfully traverse this rejection.

Claim 21 has been amended to remove the references to "alterations, additions or deletions". With respect to the term "substitutions", Applicants respectfully submit that the metes and bounds of this term when used in connection with an amino acid sequence is well known to those skilled in the art. Specifically, it is known in the art that amino acids are routinely grouped by the functionality of their side chains, called R groups. There are four main classes of amino acids: those with 1) nonpolar or hydrophobic R

groups; 2) neutral uncharged polar R groups; 3) positively charged R groups, and 4) negatively charged R groups.[1] For example, uncharged polar R groups contain neutral polar functional groups that can hydrogen bond with water. A single hydroxyl group contributes to the polarity of serine, threonine and tyrosine. Therefore, it follows that the substitution of serine with threonine or tyrosine would have little effect on the tertiary structure of a polypeptide and would not alter the functionality of the protein. By way of a further example, there are five amino acids within the family of nonpolar amino acids that contain aliphatic hydrocarbon R groups (alanine, leucine, isoleucine, valine, and proline). Substitutions within this group should have little effect on the functionality of the protein. Therefore, Applicants submit that an adequate written description for this term has been provided and that this rejection should be withdrawn.

Claims 21 to 27 are rejected under 35 U.S.C. Section 112, second paragraph as being indefinite. Specifically, the Examiner states that the phrase "Ah receptor" is indefinite. In view of the amendment to claim 21, Applicants submit that this rejection should be withdrawn.

Claims 21, 22, 26 and 27 are rejected under 35 U.S.C. Section 102(a) as being anticipated by Ema et al., *Biochem. Biophys. Res. Comm.*, 184(1):246-253 (1992). Applicants respectfully traverse this rejection.

In view of the amendment to claim 21 Applicants submit that this rejection is now moot and should be withdrawn.

Claims 21, 22, 26 and 27 are rejected under 35 U.S.C. Section 102(b) as being anticipated by Bradfield et al., *Molecular Pharmacology*, 39(11):13-19 (1991). Applicants respectfully traverse this rejection.

---

[1] See *Biochemistry*, Second Edition, "The Molecular Basis of Cell Structure and Function," Albert L. Lehninger, Worth Publishers, 1975.

Bradfield et al. simply disclose the N-terminal amino acid sequence of a mouse Ah receptor. This N-terminal amino acid sequence is 26 amino acids in length. Claim 21 is directed to an amino acid sequence of SEQ ID NO:37 and substitutions thereof. The amino acid sequence of SEQ ID NO:37 is 72 amino acids in length. Therefore, because Bradfield et al. do not disclose each and every element of the claimed invention, this rejection should be withdrawn.

Applicants submit that claim 21 is now in condition for allowance.

If any additional fees are incurred as the result of the filing of this paper, authorization is given to charge deposit account number 23-0785.

Respectfully submitted,

By: _____
Lisa V. Mueller (Reg. No. 38,978)
Attorney for Applicant

WOOD, PHILLIPS, KATZ, CLARK & MORTIMER
500 MADISON STREET
SUITE 3800
CHICAGO, IL 60661
(312)-876-1800

CERTIFICATE OF MAILING

I hereby certify that this Amendment is being deposited with the United States Postal Service with sufficient postage as First Class Mail in an envelope addressed to: Commissioner for Patents, Washington D.C., 20231 on a July 1, 2002.

_____